

## Reviewer Report

**Title: Real-time DNA barcoding in a rainforest using nanopore sequencing: opportunities for rapid biodiversity assessments and local capacity building**

**Version: Original Submission**    **Date: 1/11/2018**

**Reviewer name: Arwyn Edwards**

### Reviewer Comments to Author:

Pomerantz et al describe the use of portable nanopore sequencing to assess biodiversity and identify animal species. The paper describes a consequential advance in that portable biodiversity assessment offers a powerful tool for conservation, research and education. I consider the approach of the authors rigorous and the presentation of data and advance made clear.

My major concern is that the paper spends approximately 250 out of the 600 lines in the main body of the manuscript discussing the broader implications of the work described, rather than the work itself. Evidently, this is an important element of a discussion section, but the narrative developed from ca. line 350 towers over the actual work performed. Many areas of this narrative are speculative: an important role of the discussion is to evaluate the work performed itself, placing it into context, rather than flagging all the possible areas of potential use, or cost implications (which will likely change rapidly) I would strongly recommend that the results and discussion are separated, and that the discussion is condensed significantly, to strengthen its focus on the results, their limitations and interpretations - before a briefer subsection of the discussion deals with the broader interest areas. This is likely to necessitate a substantial rewrite of the results/discussion section.

Figure 1 is of contextual interest only and is not required to understand the advance presented. It should be removed or merged with Figure 2, which is generally illustrative of the research process.

Genbank data is listed as pending - thanks for making it available for review.

Minor comments.

L116: Minor point: Not necessarily a standard laptop computer. The specification of laptop according to Oxford Nanopore Technologies is very high, constraining accessibility.

L121: Snowdonia National Park, Wales

L123-126: this can be updated to include bacterial ID on the ISS.

L278: Should this read Results & Discussion?

## Methods

Are the methods appropriate to the aims of the study, are they well described, and are necessary controls included? Yes

## Conclusions

Are the conclusions adequately supported by the data shown? Yes

## Reporting Standards

Does the manuscript adhere to the journal's guidelines on [minimum standards of reporting](#)? Yes

Choose an item.

### **Statistics**

Are you able to assess all statistics in the manuscript, including the appropriateness of statistical tests used? Yes, and I have assessed the statistics in my report.

### **Quality of Written English**

Please indicate the quality of language in the manuscript: Acceptable

### **Declaration of Competing Interests**

Please complete a declaration of competing interests, considering the following questions:

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If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

Costs for attending and presenting at the Nanopore Community Meeting in New York in 2016 and 2017 have been covered by Oxford Nanopore Technologies, Ltd. Oxford Nanopore Technologies Ltd have supplied free reagents for outreach work in September 2017. No direct funding, fees or salary has been provided, and there are no other competing interests to declare.

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